

Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (currently amended) A method for joining a blood conduit having a lumen, distal region, and proximal region, to a blood vessel having a wall, in a patient, the method comprising:

making an incision in the blood vessel wall;

inserting a tubular member comprising a tubular wall defining a lumen and having a distal region and a proximal region into the conduit;

advancing the tubular member distal region into the blood vessel through the incision and then expanding the tubular wall and the lumen of the tubular member distal region radially outward within the blood vessel;

fixedly joining the conduit distal region to the vessel wall near the incision while providing an oxygenated liquid flow from an outlet of the tubular member disposed within the conduit and into the blood vessel; and

after fixedly joining the conduit to the vessel, withdrawing the tubular member through the conduit.

2. (Original) The method of claim 1, in which the inserting is performed before the advancing.

3. (Previously presented) The method of claim 1, in which the inserting is performed after the advancing.

4. (Original) The method of claim 1, in which the fixedly joining includes suturing the conduit to the blood vessel.

5. (Original) The method of claim 1, in which the blood vessel is a coronary artery, the conduit is a saphenous vein, and in which the fixedly joining includes fixedly joining the saphenous vein to the coronary artery.

6. (Original) The method of claim 1, in which the blood vessel is a coronary artery, the conduit is an internal mammary artery, and in which the fixedly joining includes fixedly joining the internal mammary artery to the coronary artery.
7. (Canceled)
8. (Currently Amended) The method of claim 1 ~~7~~, in which the tubular member distal region includes a flow restrictor and a weakened wall region proximal of the flow restrictor, wherein the expanding includes forcing the oxygenated liquid ~~fluid~~ under pressure through the tubular member to expand the weakened distal region.
9. (Currently Amended) The method of claim 1, in which ~~the~~ oxygenated liquid ~~fluid~~ includes blood.
10. (Currently Amended) The method of claim 1, in which the oxygenated liquid ~~fluid~~ includes a non-blood oxygenated carrying substance.
11. (Currently Amended) The method of claim 1, in which the oxygenated liquid ~~fluid~~ includes blood supplied from the patient's femoral artery.
12. (Currently Amended) The method of claim 1, in which the oxygenated liquid ~~fluid~~ includes blood supplied from the patient's aorta.
13. (Currently Amended) The method of claim 1, further comprising retracting the tubular member within the conduit and further providing the oxygenated liquid ~~fluid~~ through the tubular member to the conduit proximal region.
14. (Currently Amended) The method of claim 1, wherein the patient has a blood pressure, wherein the oxygenated liquid ~~fluid~~ is provided at a pressure higher than the patient's blood pressure.
15. (Canceled)

16. (Canceled)

17. (Currently Amended) The method of claim ~~14~~ 16, in which the liquid ~~fluid~~ pressure is provided through a port into the tubular member that is distinct from the proximal end.

18. (Previously presented) The method of claim 1, further comprising inserting a stiffening member within the tubular member prior to inserting the tubular member into the conduit.

19. (Original) The method of claim 1, further comprising inserting a stiffening member into the tubular member.

20. (Original) The method of claim 19, wherein the advancing the tubular member into the blood vessel is performed while the stiffening member is inside the tubular member.

Claims 21-31 (Canceled).

32. (Currently Amended) A method for joining a blood conduit having a lumen, a distal region, and a proximal region, to a blood vessel having a lumen, a proximal end, and a wall, in a patient, the method comprising:

inserting a tubular member comprising a tubular wall defining a lumen and having a distal region and a proximal region into and through the conduit;

advancing the tubular member distal region into the blood vessel lumen through the blood vessel proximal end and then expanding the tubular wall and the lumen of the tubular member distal region radially outward within the blood vessel;

fixedly joining the conduit distal region to the vessel wall near the blood vessel proximal end while providing an oxygenated liquid flow from an outlet of the tubular member disposed within the conduit and into the blood vessel; and

after fixedly joining the conduit to the vessel, withdrawing the tubular member through the conduit.

33. (Original) The method of claim 32, in which the inserting is performed before the advancing.

34. (Original) The method of claim 32, in which the inserting is performed after the advancing.
35. (Original) The method of claim 32, in which the fixedly joining includes suturing the conduit to the blood vessel.
36. (Original) The method of claim 32, in which the blood vessel is a coronary artery, the conduit is a saphenous vein, and in which the fixedly joining includes fixedly joining the saphenous vein to the coronary artery.
37. (Original) The method of claim 32, in which the blood vessel is a coronary artery, the conduit is an internal mammary artery, and in which the fixedly joining includes fixedly joining the internal mammary artery to the coronary artery.
38. (Canceled)
39. (Currently Amended) The method of claim 32 38, in which the tubular member distal region includes a flow restrictor and a weakened wall region proximal of the flow restrictor, wherein the expanding includes forcing the oxygenated liquid ~~fluid~~ under pressure through the tubular member to expand the weakened distal region.
40. (Currently Amended) The method of claim 32, in which the oxygenated liquid ~~fluid~~ includes blood supplied from the patient's femoral artery.
41. (Currently Amended) The method of claim 32, in which the oxygenated liquid ~~fluid~~ includes blood supplied from the patient's aorta.
42. (Currently Amended) The method of claim 32, wherein the patient has a blood pressure, wherein the oxygenated liquid ~~fluid~~ is provided at a pressure higher than the patient's blood pressure.
43. (New) A method for joining a blood conduit having a lumen, distal region, and proximal region, to a blood vessel having a wall, in a patient, the method comprising:

making an incision in the blood vessel wall;
inserting a tubular member having a distal region and a proximal region into the conduit;
advancing the tubular member distal region into the blood vessel through the incision;
fixedly joining the conduit distal region to the vessel wall near the incision while
providing an oxygenated liquid flow from an outlet of the tubular member disposed within the
conduit and into the blood vessel; and
after fixedly joining the conduit to the vessel, withdrawing the tubular member into the
conduit and further providing the oxygenated fluid through the tubular member to the lumen of
the conduit proximal region.